OIPE JUL 18 2005 PATENT & TRADEMARK OFFICE

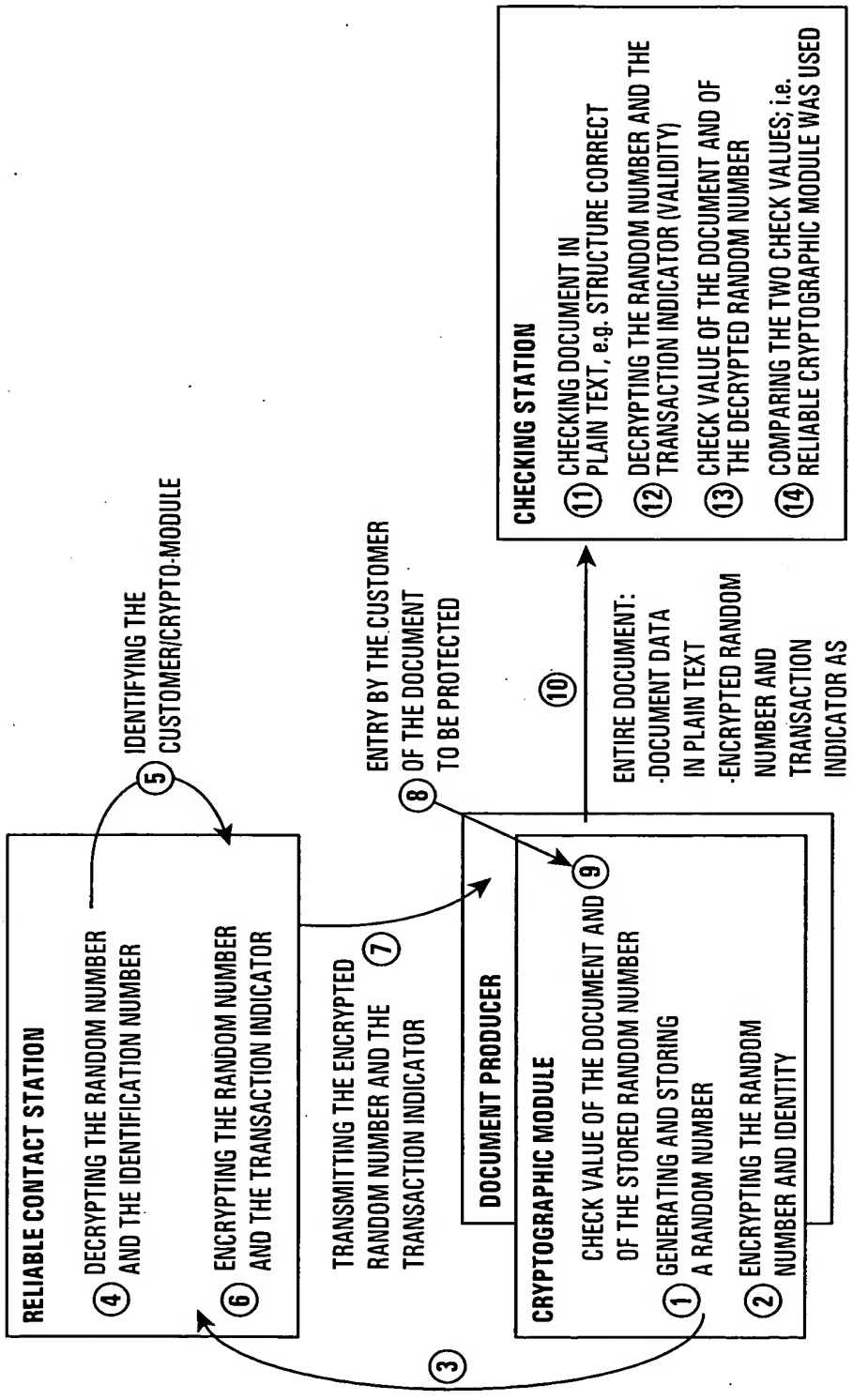

FIGURE 1

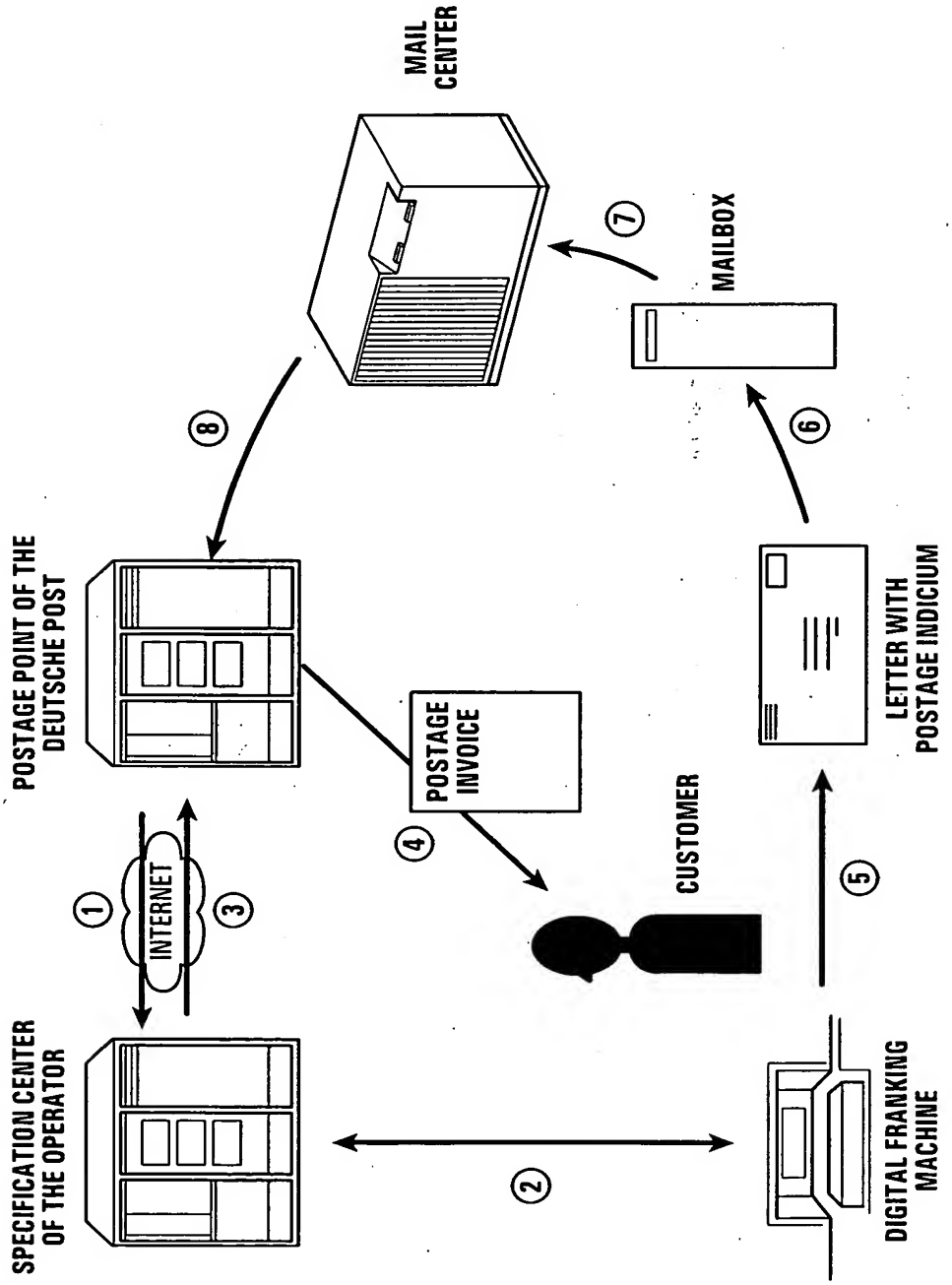
MAIL CENTER
MAILBOX
POSTAGE POINT OF THE DEUTSCHE POST
POSTAGE INVOICE
LETTER WITH POSTAGE INDICIUM
CUSTOMER
INTERNET
SPECIFICATION CENTER OF THE OPERATOR
DIGITAL FRANKING MACHINE
1
2
3
4
5
6
7
8

FIGURE 2

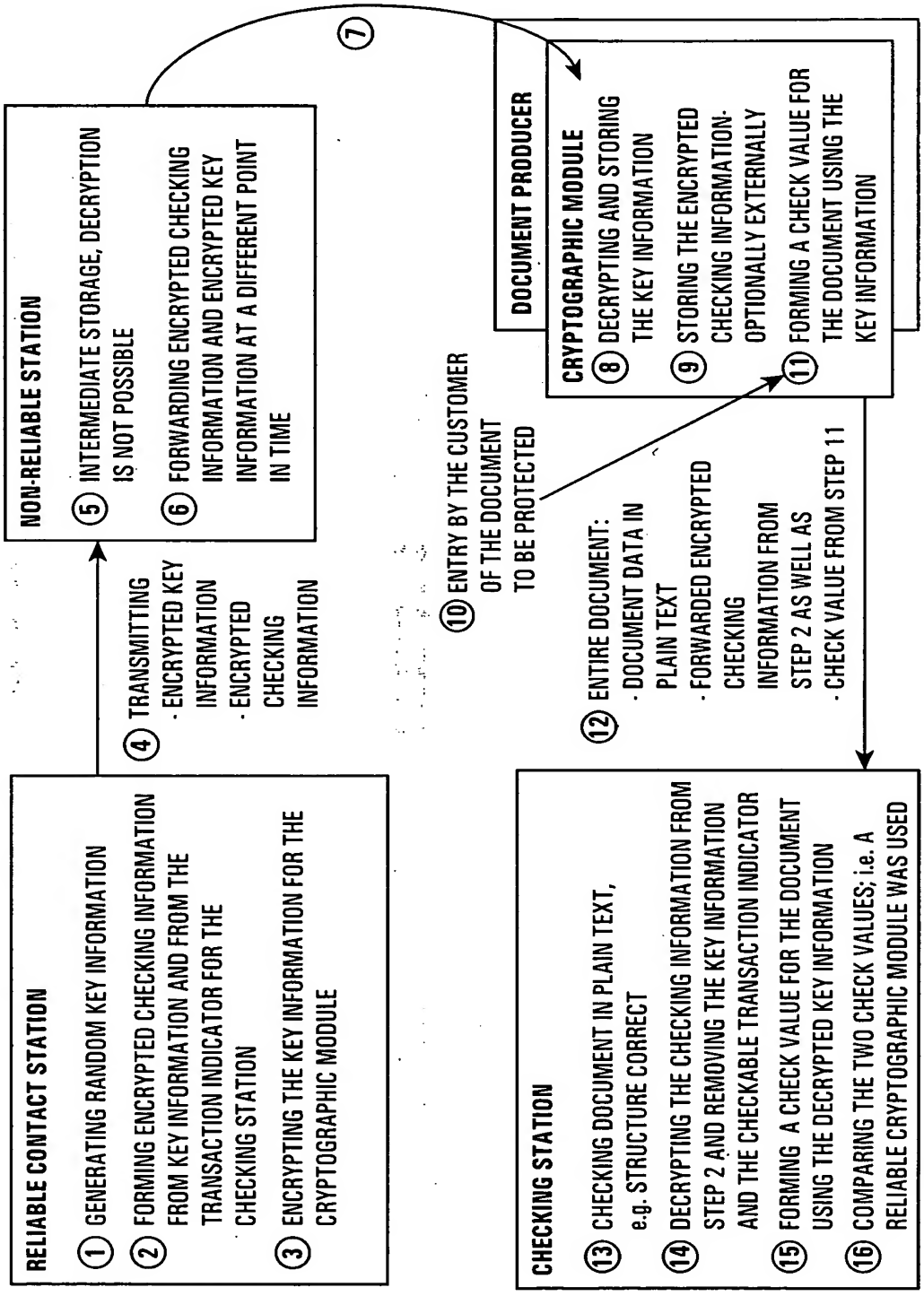
RELIABLE CONTACT STATION
① GENERATING RANDOM KEY INFORMATION
② FORMING ENCRYPTED CHECKING INFORMATION FROM KEY INFORMATION AND FROM THE TRANSACTION INDICATOR FOR THE CHECKING STATION
③ ENCRYPTING THE KEY INFORMATION FOR THE CRYPTOGRAPHIC MODULE
④ TRANSMITTING
- ENCRYPTED KEY INFORMATION
- ENCRYPTED CHECKING INFORMATION
NON-RELIABLE STATION
⑤ INTERMEDIATE STORAGE, DECRYPTION IS NOT POSSIBLE
⑥ FORWARDING ENCRYPTED CHECKING INFORMATION AND ENCRYPTED KEY INFORMATION AT A DIFFERENT POINT IN TIME
⑦
DOCUMENT PRODUCER
CRYPTOGRAPHIC MODULE
⑧ DECRYPTING AND STORING THE KEY INFORMATION
⑨ STORING THE ENCRYPTED CHECKING INFORMATION- OPTIONALLY EXTERNALLY
⑪ FORMING A CHECK VALUE FOR THE DOCUMENT USING THE KEY INFORMATION
⑩ ENTRY BY THE CUSTOMER OF THE DOCUMENT TO BE PROTECTED
⑫ ENTIRE DOCUMENT:
- DOCUMENT DATA IN PLAIN TEXT
- FORWARDED ENCRYPTED CHECKING INFORMATION FROM STEP 2 AS WELL AS
- CHECK VALUE FROM STEP 11
CHECKING STATION
⑬ CHECKING DOCUMENT IN PLAIN TEXT, e.g. STRUCTURE CORRECT
⑭ DECRYPTING THE CHECKING INFORMATION FROM STEP 2 AND REMOVING THE KEY INFORMATION AND THE CHECKABLE TRANSACTION INDICATOR
⑮ FORMING A CHECK VALUE FOR THE DOCUMENT USING THE DECRYPTED KEY INFORMATION
⑯ COMPARING THE TWO CHECK VALUES; i.e. A RELIABLE CRYPTOGRAPHIC MODULE WAS USED

FIGURE 3